

A SYNOPSIS OF THE GENUS NYCTEOLA FROM  
NORTH AMERICA, INCLUDING A NEW  
SPECIES FROM ARIZONA  
(LEPIDOPTERA: NOCTUIDAE)

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The North American species of the genus *Nycteola* Hübner have been discussed, and their genitalia figured, by McDunnough (1943, pp. 60-62, figs. 1-3) and Fletcher (1959, pp. 51-52, figs. 1-5). The former illustrated the aedeagus of *frigidana* (Walker), *columbiana* (H. Edwards), and *cinereana* Neumoegen and Dyar. Fletcher, in addition to presenting a more complete synonymy, distributional notes and the present location of the types, figured the aedeagus of *scriptana* (Walker) and the female genitalia of all four of these species.

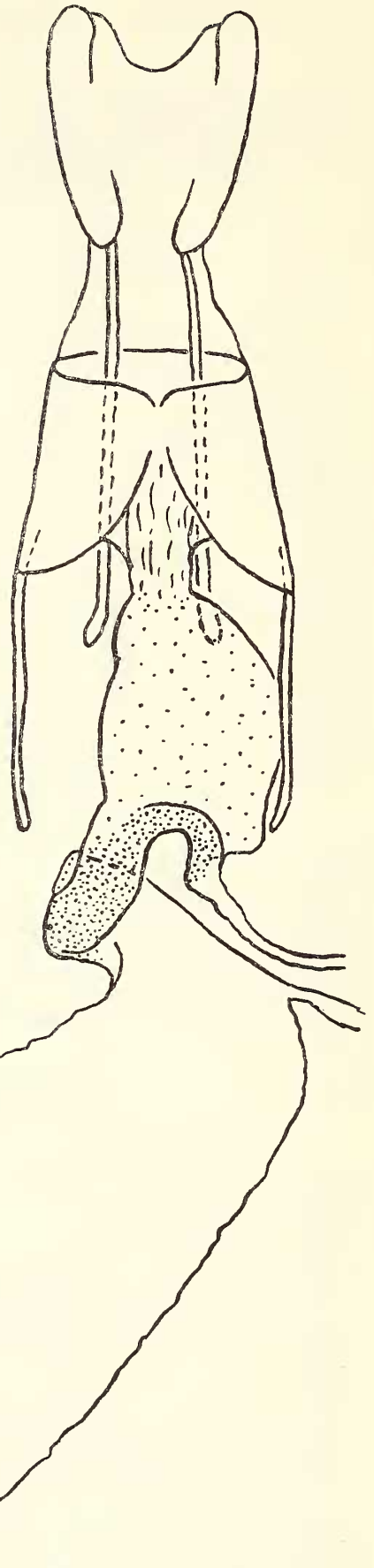
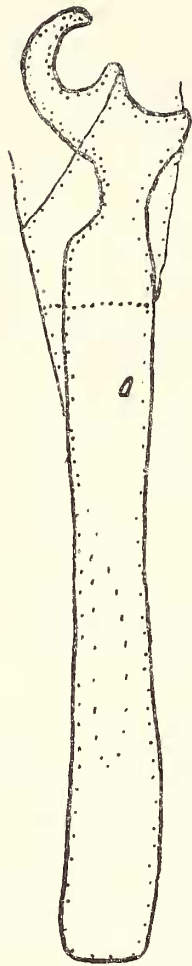
Fletcher also noted the presence of a fifth North American species in this genus; a lack of males prevented his naming it. Since the appearance of his paper additional material of both sexes has come to hand, and so I take pleasure in naming this species after Mr. D. S. Fletcher of the Department of Entomology, the British Museum (Natural History).

***Nycteola fletcheri*, new species**

A species closely similar to *cinereana* Neumoegen and Dyar, having grayish white secondaries, and best distinguished by genitalic characters.

UPPER SURFACE OF FOREWINGS gray, with geminate, black, wavy t. a. and t. p. lines, the former more or less running at right angles to costa, the latter S-shaped below cell; median area dark gray in cell, except for brown or reddish brown, slightly lunate, discal spot, below cell pale gray or grayish brown; base of wing with black streaks along anterior margin of anal vein and of radial vein; basal line geminate, indistinctly represented; outer portion of wing with incompletely represented, dark gray or grayish black s. t. line; terminal line black, narrow; fringe concolorous with wing. Hind wings shiny white, overlain with grayish or grayish brown scales, and without maculation.

UNDER SURFACE OF PRIMARIES unicolorous grayish brown, with white



scaling on costa; secondaries shiny white, overlain with grayish or grayish brown scales.

LENGTH OF FOREWING Males, 12-13 (holotype) mm.; females, 12-13 (allotype) mm.

MALE GENITALIA Similar to the other species in the genus, being quite complex. The aedeagus (fig. 1) furnishes the best recognition character, as it is slender, terminating in a broad, sickle-shaped protuberance with a basal tooth, and having a very small cornutus.

FEMALE GENITALIA Ductus bursae swollen from narrow ostial region, somewhat globular; ductus seminalis arising anteriorly on right side or near midline; corpus bursae arising from left side of ductus bursae, being more heavily sclerotized than the latter, extending anterolaterally, sharply curved dorsally and going posterolaterally, the larger, more membranous portion of corpus bursae curving anteriorly and being elongate to globular in outline. (fig. 2).

TYPES Holotype, male, Southwestern Research Station of the American Museum of Natural History, 5 miles west of Portal, Cochise County, Arizona, elevation 5400 feet, March 11, 1961 (M. A. Cazier); allotype, female, same data, July 26, 1957 (M. Statham). Paratypes, same data as types, one male, February 16, 1961 (M. A. Cazier), and 10 females, various dates in May, July, August and September (W. J. Gertsch, M. Statham, C. W. Kirkwood). All specimens in the collection of the American Museum of Natural History.

Fletcher states that a specimen of this species in the collection of the British Museum (Natural History) is labelled Santa Monica, California.

This species is closely allied to *cinereana*. The sickle-shaped termination of the male aedeagus, and the recurved base of the corpus bursae will distinguish *fletcheri* from the previously described species.

The five North American species of *Nycteola* are quite similar to one another in size, maculation, and color. It is perhaps safest, when in doubt as to the correct identity of a specimen, to make a genitalic dissection. Fortunately the genitalia of both sexes have good characters so that the different species may be distinguished by these organs. The following keys are given as an aid in identification.

### KEY TO SPECIES

#### BASED ON MALE GENITALIA

1. Aedeagus without curved, apical spinose process ..... *frigidana* (Walker)
- Aedeagus with curved, apical spinose process ..... 2
2. Apical spinose process arising from a more or less rectangular sclerotized piece, extending at angle to aedeagus ..... 3

- Apical spinose process sickle-shaped, recurving toward longitudinal axis of aedeagus ..... 4
3. Apical spinose process with transverse piece at right angle to aedeagus, and slightly more than twice as long as basal sclerotized piece ..... *scriptana* (Walker)
- Apical spinose process with curved transverse piece at 45° angle to aedeagus, and not much longer than basal sclerotized piece ..... *cinereana* Neumoegen and Dyar
4. Sickle-shaped apical piece slender, elongate, gently curved ..... *columbiana* (H. Edwards)
- Sickle-shaped apical piece short, thick, sharply recurved, and with prominent basal tooth ..... *fletcheri* Rindge

BASED ON FEMALE GENITALIA

1. Posterior sclerotized portion of corpus bursae very long and slender, much exceeding the length of the ductus bursae ..... *frigidana* (Walker)
- Posterior sclerotized portion of corpus bursae shorter than length of ductus bursae ..... 2
2. Ductus seminalis arising on left side ..... 3
- Ductus seminalis arising on right side ..... 4
3. Ductus seminalis arising from broad base on sclerotized ductus bursae ..... *scriptana* (Walker)
- Ductus seminalis arising from membranous area between sclerotized ductus bursae and main body of corpus bursae ..... *cinereana* Neumoegen and Dyar
4. More heavily sclerotized portion of ductus bursae included within ductus bursae ..... *columbiana* (H. Edwards)
- Ductus bursae evenly sclerotized, the more heavily sclerotized area being anterior thereto ..... *fletcheri* Rindge

*References Cited*

- Fletcher, D. S. 1959. Notes on North American species of *Nycteola* (Lepidoptera, Noctuidae). Jour. New York Ent. Soc., 67: 51-52, pl. 8, figs. 1-5.
- McDunnough, J. 1943. Phalaenid notes and descriptions (Lepidoptera). Canadian Ent., 75: 59-62, figs. 1-3.
1. Aedeagus of male genitalia of *Nycteola fletcheri*, new species.
2. Female genitalia of same species.